

III. REMARKS

1. Claims 1 and 26 are amended. Claims 6-8 are cancelled without prejudice.
2. Applicant respectfully submits that the rejection of claim 21 under 35 U.S.C. §112, second paragraph is not understood. The claim recites that the wireless connection is a high frequency connection. This is described for example, beginning on page 4, line 5; page 5, line 16; page 7, line 21; page 9, line 16. Thus, claim 21 should be in the proper form.
3. Claims 1-10, 12, 15, 20-21 and 26 are not anticipated by Tuttle et al. (U.S. Patent No. 6,101,375) ("Tuttle") under 35 U.S.C. §102(e).

Claims 1 and 26, as amended, describes a system for setting up a communication of potentially sensitive information between a point of sale device and mobile station. This requires that the communication is set up with the particular mobile that is closest to the point of sale (POS) device. This is achieved by controlling the signal level of either the transmissions sent from the POS device, or the signals received at the POS device, such that the signal level is initially relatively low while trying to connect the device, and is increased once a connection is set up. Claims 1 and 26 recite that the signal level of the transmitted signal from the POS device is initially low and is increased until a connection is made with the mobile device, or a maximum level is reached that is less than the level used to transmit once the connection has been established. This is not disclosed or suggested by Tuttle.

Tuttle discloses a method for establishing a connection between an interrogator RF transceiver and an RFID tag. This operates by sending a "wake-up" signal to the RFID tag at an initially low level, and increasing the transmit power until a reply is heard from the tag, or the maximum transmit power is reached. The goal of Tuttle is to ensure that the power is utilized efficiently, by ensuring that the connection is established using the lowest power possible, and by encoding the value of the transmit power into the signal sent from the interrogator to the tag, so that the tag can reply with the same power level, thereby saving power in the tag. This also benefits the circuit design, as it can be ensured that the received signal level in the tag is always at a similar level, regardless of the distance between the communicating pair.

Applicant's invention as recited in claims 1 and 26 is not anticipated by Tuttle because in Applicant's invention, unlike Tuttle, the maximum power to which the signal can be increased while no connection is made is less than the power used under normal transmissions. The invention disclosed in Tuttle, on the other hand, does not make any distinction between the maximum power that the connection establishment signal can be sent at, and the transmission power during normal communication.

Applicant's invention and Tuttle address two significantly different and distinct problems. Tuttle is attempting to connect to a certain RFID tag, regardless of how far away it is. Therefore, it is the goal of Tuttle to always find the RFID tag to connect to, even if this results in the power being increased to the full amount used in normal communications.

However, in Applicant's invention communication is set up between the point of sale device and the closest mobile station, out of a

potentially large number of mobile stations. A very important distinction is that the system must not keep looking for mobiles further and further away from the point of sale terminal. If a transaction is taking place between the point of sale device and the desired mobile station, then it is certain that the mobile station and the point of sale device are in very close proximity to each other. It would not be suitable for the system to keep increasing the power to find mobile stations increasing distances away, as past a certain distance from the point of sale device, the mobile stations cannot be associated with the required transaction. This is the reason for the distinction of having a maximum transmit power during connection establishment that is lower than the transmit power used after the connection is established.

As highlighted by the Examiner, it is possible that the method disclosed in Tuttle will increase the power to a level below the normal transmit power before a connection is established, assuming that the tag is contacted before the maximum transmit power is reached. However, this is not the same as the present invention as the prior art always has the potential to increase the power as high as the normal power, whereas this cannot occur in the present invention. Therefore, although Tuttle may increase to a power less than the normal power under some circumstances, this will entirely depend on the situation in which the method is operated in terms of the tag location.

The invention recited in claims 9-17 and 27 describe the embodiment of the invention in which the received signal level at the POS device (i.e., the signal transmitted from the mobile station to the POS terminal) is attenuated in the receiver of the POS device. In this way, the same goal can be achieved of only

connecting to the closest mobile station, but this is now done by changing the level of attenuation in the received signal path. Initially, a high level of attenuation is used, and the attenuation is reduced until a response is heard from the mobile, or until the minimum level of attenuation is reached where the minimum level of attenuation is greater than the attenuation used during normal communications. Therefore, with this system, a fixed power request is transmitted from the POS device, and potentially many mobiles will respond to this. However, only the mobile closest to the POS device will have low enough path loss for the received signal at the POS device to be detected after attenuation.

The Examiner alleges that claims 9, 10, 12 and 15 are anticipated by Tuttle. However, there is no mention in Tuttle of being able to control the signal level in the received path. Tuttle only discloses control of the transmit powers. What is disclosed in Tuttle is the decoding of a signal from the receive path, which is then used to set the transmit power for the tag. However, this is not the same as controlling the actual received signal level through the use of an attenuator. Therefore, in our view, these claims are not anticipated by Tuttle.

4. Claims 18 and 22-23 are not unpatentable over Tuttle in view of Meng (U.S. Patent No. 6,697,375) under 35 U.S.C. §103(a).

Claims 18 and 22-23 depend from claim 1, which should be allowable for the above-stated reasons. Claims 18, 22 and 23 should be allowable at least by reason of their respective dependencies.

5. Claims 19, 24 and 25 are not unpatentable over Tuttle in view of Pitroda et al. (U.S. Patent No. 6,705,520) ("Pitroda")

under 35 U.S.C. §103(a). Claim 19 depends from claim 1. Thus, these dependent claims should be allowable at least by reason of their dependencies.

6. Claims 11, 13-17 and 27 are not unpatentable over Tuttle in view of Beamish et al. (U.S. Patent No. 6,445,732) ("Beamish") under 35 U.S.C. §103(a).

Claim 11 depends from claim 9, which, as noted above, is neither disclosed nor suggested by Tuttle. These dependent claims should be allowable at least by reason of their respective dependencies. Furthermore, Beamish does not disclose or suggest using different attenuation levels during connection and normal operation. Beamish only changes the attenuation depending on the received signal strength. Claim 11 recites attenuating the signal by a starting amount and reducing the attenuation to provide signals at the relatively low level.

Beamish only discloses a system for reducing the requirements for a communications receiver to receive signals with wide power swings. This is achieved by using an attenuator in the analogue receive signal path and using a measure of the receive signal strength to set the level of attenuation. The power of the signals coming into the receiver can therefore be reduced to a suitable level before further processing.

Thus, the combination of Tuttle and Beamish does not disclose each feature of Applicant's invention as recited in the claims and the claims should be allowable.

There is also no motivation to combine Tuttle with Beamish to achieve Applicant's invention, as is required for obviousness under 35 U.S.C. §103(a). In order to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), there must be some

suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or combine reference teachings. There must also be a reasonable expectation of success, and the reference(s), when combined, must teach or suggest all of the claim limitations. (See M.P.E.P. §2142). As noted above, Tuttle in view of Beamish does not disclose or suggest each feature of Applicants' invention as claimed in claims 11, 13-17 and 27.

Neither reference provides the requisite suggestion or motivation to modify the references as proposed by the Examiner. The Examiner's proposition that Applicants' invention would be obvious as recited in the claims is not supported by the factual contents of Tuttle and Beamish.

Neither Tuttle nor Beamish suggest using the inventions for the purposes of discovering the closest mobile station. Therefore, it would not be obvious for a person skilled in the art to combine the teachings of these two documents, in order to result in the present invention. Furthermore, it would not make sense for the skilled man to contemplate modifying the invention of Tuttle to use an attenuator such as in Beamish. The reason for this is that the system in Tuttle would then operate by sending out a fixed power request to the RFID tags, and attenuating the response signal on its reception at the interrogator. However, it was the goal of Tuttle to reduce the power usage by encoding the signal level used to reach the RFID tag into the transmission, so that the tag could reply with the same power. Additionally, it was a goal to reduce the dynamic range of the signals at the tags, reducing the requirements on the circuit design. These goals cannot be achieve by using an attenuator in the receive path. Therefore, the use of such an attenuator would

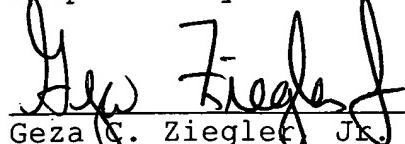
be contrary to the goals of the invention, and it would not be obvious to combine the teachings of these two documents and result in the present invention.

The references themselves and/or the knowledge generally available to one of skill in the art does not provide the requisite motivation or suggestion to modify the references as proposed for purposes of 35 U.S.C. §103(a). When "the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference". In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). The Examiner is requested to provide an indication as to where any such teaching, suggestion or motivation appears in the references. Absent such a teaching, it is submitted that a *prima facie* case of obviousness over Tuttle and Beamish under 35 U.S.C. §103(a) is not established.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any overpayment to Deposit Account No. 16-1350.

Respectfully submitted,



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